66 138. (New) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

~~wherein the array members comprise analyte binding reagents that bind specific polypeptides,~~ and

wherein at least two array members are different from one another.--

REMARKS

The foregoing is responsive to the Office Action of November 4, 2002 and limits this application to the subject matter indicated as being allowed or allowable. Independent claims 48, 95, 96 and 97 have been amended to incorporate the allowable scopes of claims 56, 68, 72 and 75, respectively. All other claims are dependent on the resultant, allowable five independent claims (48 and 94-97). New claims 135-138 are the same as independent claims 48 and 95-97, respectively, but with the last "wherein" clause of claim 94 also added.

This amendment is not to be construed as acquiescing in any aspect of the Office Action or any statement of the Office Action. Applicant intends to file a continuation application to pursue additional subject matter and will address any remaining issues at that time.

The Examiner's comments on claims 57, 78 and 97 have all been rendered moot by the foregoing amendments, it is believed. However, should the Examiner wish to discuss any aspect, he is courteously encouraged to telephone the undersigned for an expeditious resolution.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend the claims as follows:

48. (Twice Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein the array members ~~comprise analyte binding reagents~~ are cross-sectioned by a non-planar cut.

49. (Amended) A method according to claim ~~48~~ 94, wherein the bundle further comprises alignment members effective for aligning wafers with one another.

50. (Twice Amended) A method according to claim ~~48~~ 94, wherein each wafer further comprises embedded information spatially separate from said array members.

51. (Amended) A method according to claim ~~48~~ 94, wherein the array members are disposed on the surface of the lumen.

52. (Twice Amended) A method according to claim ~~48~~ 94, wherein array members completely fill the lumen and form part of said first and second wafer surfaces.

53. (Amended) A method according to claim ~~48~~ 94, wherein the array members are cross-sectioned perpendicular to their alignment.

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54. (Amended) A method according to claim ~~48~~ 94, wherein the array members are cross-sectioned at an angle of 10 to 80 degrees or 100 to 170 degrees to their alignment.

55. (Amended) A method according to claim ~~48~~ 94, wherein the array members are cross-sectioned by a smooth planar cut.

57. (Amended) A method according to claim ~~56~~ 48, wherein the surface area of array members exposed by cross-sectioning is increased over that provided by a smooth, planar cut.

58. (Amended) A method according to claim ~~48~~ 94, wherein structural members are comprised of a plastic, a glass, a metal or a ceramic.

63. (Amended) A method according to ~~claims 48~~ claim 94, wherein the array members are spaced about 1.0 to about 1,000 micrometers apart.

64. (Twice Amended) A method according to claim ~~48~~ 94, wherein the array members have a surface area of about 1.0 to about 1,000,000 μm^2.

65. (Amended) A method according to claim ~~48~~ 94, wherein the density of array members in the array is about 250 to about 2,500,000 array members per square centimeter of cross sectional surface area of the array.

66. (Twice Amended) A method according to claim ~~48~~ 94, wherein the density in the array is about 10 to about 100,000 array members per square centimeter of total surface area of the array.

67. (Amended) A method according to claim ~~48~~ 94, wherein there are about 100

to about 2,500,000 aligned array members.

69. (Amended) A method according to claim ~~48~~ 94, wherein cross-sectioning produces sections about 2.5 to about 2,500 micrometers thick.

71. (Twice Amended) A method according to claim ~~97~~ 94, wherein the array members comprise analyte binding reagents.

73. (Amended) A method according to claim ~~96~~ 94 wherein the array members comprise analyte binding reagents that hybridize to DNA or RNA having specific nucleotide sequences, wherein the sequence specific binding reagents are polynucleotides, peptide-nucleic acids or polyamides.

76. (Twice Amended) A method according to claim ~~75~~ 94 wherein the array members comprise analyyte binding regents that bind specific polypeptides, wherein the polypeptide-specific binding reagents are polyclonal antibodies, monoclonal antibodies, single chain antibodies, or antigen-binding fragments of antibodies.

78. (Amended) A method according to claim ~~48~~ 94, ~~wherein the array is used to carry~~ further comprising carrying out an immunoassay, a hybridization assay, a ligand-binding assay or receptor-binding assay, or a substrate analog affinity assay, employing an array prepared by the process of claim 48.

95. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

wherein ~~structural members are comprised of a plastic~~ there are about 100 to 2,500,000 different aligned array members.

96. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

~~with the proviso that not all the array members are a glass~~ wherein the array members comprise analyte binding reagents that hybridize to DNA or RNA having specific nucleotide sequences.

97. (Amended) A method of making replicate arrays, comprising repeatedly sectioning a bundle of aligned array members to make wafers comprising replicate arrays, wherein:

each array comprises structural members each of which has a lumen therethrough which is continuously enclosed thereby;

each array member is a homogenous composition disposed within a separate lumen of a structural member which extends from a first to a second wafer surface formed by said sectioning; and

each structural member and each array member are aligned in the bundle parallel to an alignment axis and occupy a defined position in the two dimensions orthogonal thereto;

~~wherein said replicate arrays produced are effective for performing an assay~~ wherein the array members comprise analyte binding reagents that bind specific polypeptides.